RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/804,481A
Source: 1609
Date Processed by STIC: 11/3/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY** or,
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221
Effective 12/13/03: **TELEPHONE: 571-272-2510; FAX: 571-273-0221**

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**http://www.uspto.gov/ebc/efs/downloads/documents.htm**> , **EFS Submission User Manual** - ePAVE)
2. **U.S. Postal Service:** Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. **Hand Carry directly to (EFFECTIVE 12/01/03):** U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. **Federal Express, United Parcel Service, or other delivery service to:** U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03

1600

RAW SEQUENCE LISTING DATE: 11/04/2003
PATENT APPLICATION: **US/09/804,481A** TIME: 13:57:42

Input Set : **N:\Crf4\11032003\I804481A.raw**
Output Set: **N:\CRF4\11042003\I804481A.raw**

```
      1 <110> APPLICANT: de Graaf, David
      2       Lander, Eric S.
      3 <120> TITLE OF INVENTION: Novel Small Nuclear RNA Vectors and Uses
      4       Therefor
      5 <130> FILE REFERENCE: 2825.1023-001
C-->  6 <140> CURRENT APPLICATION NUMBER: US/09/804,481A
C-->  7 <141> CURRENT FILING DATE: 2001-03-12
      8 <150> PRIOR APPLICATION NUMBER: 60/188,304
      9 <151> PRIOR FILING DATE: 2000-03-10
     10 <160> NUMBER OF SEQ ID NOS: 11
     11 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     13 <210> SEQ ID NO: 1
     14 <211> LENGTH: 4639
     15 <212> TYPE: DNA
     16 <213> ORGANISM: Homo sapiens
     17 <400> SEQUENCE: 1
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     20       cgagcaaaat ttaagctaca acaaggcaag gcttgaccga caattgagct cggtacccgg 180
     21       ggagatccgg taaggaccag cttctttggg agagaacaga cgcaggggcg ggagggaaaa 240
     22       agggagaggc agacgtcact tccccttggc ggctctggca gcagattggt cggttgagtg 300
     23       gcagaaaggc agacggggac tgggcaaggc actgtcggtg acatcacgga cagggcgact 360
     24       tctatgtaga tgaggcagcg cagaggctgc tgcttcgcca cttgctgctt caccacgaag 420
     25       gagttcccgt gccctgggag cgggttcagg accgctgatc ggaagtgaga atcccagctg 480
     26       tgtgtcaggg ctggaaaggg ctcgggagtg cgcggggcaa gtgaccgtgt gtgtaaagag 540
     27       tgaggcgtat gaggctgtgt cggggcagag gcccaagatc tcaagggccc ataacatgtg 600
     28       taccatcgat tgcaggggag ataccatgat cacgaaggtg gttttcccag ggcgaggctt 660
     29       atccattgca ctccggatgt gctgacccct gcgatttccc caaagcttgg aaactcgact 720
     30       gcataatttg tggtagtggg ggactgcgtt cgcgctttcc cctgactttc tggagtttca 780
     31       aaagtagact gtacgctaac cggatcctct agagtcgacc tgcaggcatg cagaagacaa 840
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     33       ggggctctag ggggtatccc cacgcgccct gtagcggcgc attaagcgcg gcgggtgtgg 960
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     36       tccctttagg gttccgattt agtgctttac ggcacctcga ccccaaaaaa cttgattagg 1140
     37       gtgatggttc acgtagtggg ccatcgccct gatagacggt ttttcgccct ttgacgttgg 1200
     38       agtccacgtt ctttaatagt ggactcttgt tccaaactgg aacaacactc aaccctatct 1260
     39       cggtctattc ttttgattta taagggattt tggggatttc ggcctattgg ttaaaaaatg 1320
     40       agctgattta acaaaaattt aacgcgaatt aattctgtgg aatgtgtgtc agttagggtg 1380
     41       tggaaagtcc ccaggctccc caggcaggca gaagtatgca aagcatgcat ctcaattagt 1440
     42       cagcaaccag gtgtggaaag tccccaggct ccccagcagg cagaagtatg caaagcatgc 1500
     43       atctcaatta gtcagcaacc atagtcccgc ccctaactcc gcccatcccg cccctaactc 1560
     44       cgcccagttc cgcccattct ccgccccatg gctgactaat ttttttttatt tatgcagagg 1620
```

Does Not Comply
Corrected Diskette Needed
P.3

RAW SEQUENCE LISTING DATE: 11/04/2003
PATENT APPLICATION: US/09/804,481A TIME: 13:57:42

Input Set : N:\Crf4\11032003\I804481A.raw
Output Set: N:\CRF4\11042003\I804481A.raw

45 ccgaggccgc ctctgcctct gagctattcc agaagtagtg aggaggcttt tttggaggcc 1680
46 taggcttttg caaaaagctc ccgggagctt gtatatccat tttcggatct gatcagcacg 1740
47 tgttgacaat taatcatcgg catagtatat cggcatagta taatacgaca aggtgaggaa 1800
48 ctaaaccatg gccaagttga ccagtgccgt tccggtgctc accgcgcgcg acgtcgccgg 1860
49 agcggtcgag ttctggaccg accggctcgg gttctcccgg gacttcgtgg aggacgactt 1920
50 cgccggtgtg gtccgggacg acgtgaccct gttcatcagc gcggtccagg accaggtggt 1980
51 gccggacaac accctggcct gggtgtgggt gcgcggcctg gacgagctgt acgccgagtg 2040
52 gtcggaggtc gtgtccacga acttccggga cgcctccggg ccggccatga ccgagatcgg 2100
53 cgagcagccg tgggggcggg agttcgccct gcgcgacccg gccggcaact gcgtgcactt 2160
54 cgtggccgag gagcaggact gacacgtgct acgagatttc gattccaccg ccgccttcta 2220
55 tgaaaggttg ggcttcggaa tcgttttccg ggacgccggc tggatgatcc tccagcgcgg 2280
56 ggatctcatg ctggagttct tcgcccaccc caacttgttt attgcagctt ataatggtta 2340
57 caaataaagc aatagcatca caaatttcac aaataaagca ttttttttcac tgcattctag 2400
58 ttgtggtttg tccaaactca tcaatgtatc ttatcatgtc tgtataccgt cgacctctag 2460
59 ctagagcttg gcgtaatcat ggtcatagct gtttcctgtg tgaaattgtt atccgctcac 2520
60 aattccacac aacatacgag ccggaagcat aaagtgtaaa gcctggggtg cctaatgagt 2580
61 gagctaactc acattaattg cgttgcgctc actgcccgct ttccagtcgg gaaacctgtc 2640
62 gtgccagctg cattaatgaa tcggccaacg cgcggggaga ggcggtttgc gtattgggcg 2700
63 ctcttccgct tcctcgctca ctgactcgct gcgctcggtc gttcggctgc ggcgagcggt 2760
64 atcagctcac tcaaaggcgg taatacggtt atccacagaa tcaggggata acgcaggaaa 2820
65 gaacatgtga gcaaaaggcc agcaaaaggc caggaaccgt aaaaaggccg cgttgctggc 2880
66 gtttttccat aggctccgcc cccctgacga gcatcacaaa aatcgacgct caagtcagag 2940
67 gtggcgaaac ccgacaggac tataaagata ccaggcgttt ccccctggaa gctccctcgt 3000
68 gcgctctcct gttccgaccc tgccgcttac cggatacctg tccgcctttc tcccttcggg 3060
69 aagcgtggcg ctttctcaat gctcacgctg taggtatctc agttcggtgt aggtcgttcg 3120
70 ctccaagctg ggctgtgtgc acgaaccccc cgttcagccc gaccgctgcg ccttatccgg 3180
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72 tggtaacagg attagcagag cgaggtatgt aggcggtgct acagagttct tgaagtggtg 3300
73 gcctaactac ggctacacta gaaggacagt atttggtatc tgcgctctgc tgaagccagt 3360
74 taccttcgga aaaagagttg gtagctcttg atccggcaaa caaaccaccg ctggtagcgg 3420
75 tggtttttt gtttgcaagc agcagattac gcgcagaaaa aaaggatctc aagaagatcc 3480
76 tttgatcttt tctacggggt ctgacgctca gtggaacgaa aactcacgtt aagggatttt 3540
77 ggtcatgaga ttatcaaaaa ggatcttcac ctagatcctt ttaaattaaa aatgaagttt 3600
78 taaatcaatc taaagtatat atgagtaaac ttggtctgac agttaccaat gcttaatcag 3660
79 tgaggcacct atctcagcga tctgtctatt tcgttcatcc atagttgcct gactccccgt 3720
80 cgtgtagata actacgatac gggagggctt accatctggc cccagtgctg caatgatacc 3780
81 gcgagaccca cgctcaccgg ctccagattt atcagcaata aaccagccag ccggaagggc 3840
82 cgagcgcaga agtggtcctg caactttatc cgcctccatc cagtctatta attgttgccg 3900
83 ggaagctaga gtaagtagtt cgccagttaa tagtttgcgc aacgttgttg ccattgctac 3960
84 aggcatcgtg gtgtcacgct cgtcgtttgg tatggcttca ttcagctccg gttcccaacg 4020
85 atcaaggcga gttacatgat cccccatgtt gtgcaaaaaa gcggttagct ccttcggtcc 4080
86 tccgatcgtt gtcagaagta agttggccgc agtgttatca ctcatggtta tggcagcact 4140
87 gcataattct cttactgtca tgccatccgt aagatgcttt tctgtgactg gtgagtactc 4200
88 aaccaagtca ttctgagaat agtgtatgcg gcgaccgagt tgctcttgcc cggcgtcaat 4260
89 acgggataat accgcgccac atagcagaac tttaaaagtg ctcatcattg gaaaacgttc 4320
90 ttcggggcga aaactctcaa ggatcttacc gctgttgaga tccagttcga tgtaacccac 4380
91 tcgtgcaccc aactgatctt cagcatcttt tactttcacc agcgtttctg ggtgagcaaa 4440
92 aacaggaagg caaaatgccg caaaaaaggg aataagggcg acacggaaat gttgaatact 4500
93 catactcttc ctttttcaat attattgaag catttatcag ggttattgtc tcatgagcgg 4560

RAW SEQUENCE LISTING DATE: 11/04/2003
PATENT APPLICATION: US/09/804,481A TIME: 13:57:42

Input Set : N:\Crf4\11032003\I804481A.raw
Output Set: N:\CRF4\11042003\I804481A.raw

```
     94       atacatattt gaatgtattt agaaaaataa acaaataggg gttccgcgca catttccccg 4620
     95       aaaagtgcca cctgacgtc                                               4639
     97 <210> SEQ ID NO: 2
     98 <211> LENGTH: 5
     99 <212> TYPE: DNA
    100 <213> ORGANISM: Artificial Sequence
    101 <220> FEATURE:
    102 <223> OTHER INFORMATION: single-stranded restriction fragment overhand
    103 <400> SEQUENCE: 2
    104       gcagg                                                              5
    106 <210> SEQ ID NO: 3
    107 <211> LENGTH: 5
    108 <212> TYPE: DNA
    109 <213> ORGANISM: Artificial Sequence
    110 <220> FEATURE:
    111 <223> OTHER INFORMATION: single-stranded restriction fragment overhang
    112 <400> SEQUENCE: 3
    113       tgaga                                                              5
    115 <210> SEQ ID NO: 4
    116 <211> LENGTH: 33
    117 <212> TYPE: DNA
    118 <213> ORGANISM: Artificial Sequence
    119 <220> FEATURE:
    120 <223> OTHER INFORMATION: recognition site
    121 <220> FEATURE:
    122 <221> NAME/KEY: misc_feature
    123 <222> LOCATION: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 22, 23, 24,
    124       25, 26, 27, 28, 29, 30, 31, 32, 33
    125 <223> OTHER INFORMATION: n = A,T,C or G
    126 <400> SEQUENCE: 4
W--> 127       nnnnnnnnnn acnnnngtay cnnnnnnnnn nnn                              33
    129 <210> SEQ ID NO: 5
    130 <211> LENGTH: 33
    131 <212> TYPE: DNA
    132 <213> ORGANISM: Artificial Sequence
    133 <220> FEATURE:
    134 <223> OTHER INFORMATION: recognition site
    135 <220> FEATURE:
    136 <221> NAME/KEY: misc_feature
    137 <222> LOCATION: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19,
    138       20, 21, 27, 28, 29, 30, 31, 32, 33
    139 <223> OTHER INFORMATION: n = A,T,C or G
    140 <400> SEQUENCE: 5
W--> 141       nnnnnnnnnn acnnnngtnn nnnnnnnnnn nnn                              33
    143 <210> SEQ ID NO: 6
    144 <211> LENGTH: 10
    145 <212> TYPE: DNA
    146 <213> ORGANISM: Artificial Sequence
    147 <220> FEATURE:
```

No "n"s at these locations (see below)
22 (see below)
23, 24, 25, 26
n's are at these locations
'T' is at location 18.
16, there is an "n"

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Input Set : N:\Crf4\11032003\I804481A.raw
Output Set: N:\CRF4\11042003\I804481A.raw

<223> OTHER INFORMATION: modification fragment
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cacaaacaca 10
<210> SEQ ID NO: 7
<211> LENGTH: 12
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: modification fragment
<400> SEQUENCE: 7
tccacaaaca ca 12
<210> SEQ ID NO: 8
<211> LENGTH: 15
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: modification fragment
<400> SEQUENCE: 8
tcgtccacaa acaca 15
<210> SEQ ID NO: 9
<211> LENGTH: 12
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: modification fragment
<400> SEQUENCE: 9
cacaaacaca ac 12
<210> SEQ ID NO: 10
<211> LENGTH: 10
<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: modification fragment
<400> SEQUENCE: 10
cacaaacacg 10
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<212> TYPE: DNA
<213> ORGANISM: Artificial Sequence
<220> FEATURE:
<223> OTHER INFORMATION: vector construct
<400> SEQUENCE: 11
ggcccaagat ctcaagggcc cataacatgt gtaccatcga ttgcagggga gataccatg 59

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 11/04/2003
PATENT APPLICATION: **US/09/804,481A** TIME: 13:57:43

Input Set : **N:\Crf4\11032003\I804481A.raw**
Output Set: **N:\CRF4\11042003\I804481A.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 1,2,3,4,5,6,7,8,9,10,13,14,15,16,22,23,24,25,26,27,28,29,30
Seq#:4; N Pos. 31,32,33
Seq#:5; N Pos. 1,2,3,4,5,6,7,13,14,15,16,19,20,21,22,23,24,25,26,27,28,29
Seq#:5; N Pos. 30,31,32,33

VERIFICATION SUMMARY DATE: 11/04/2003
PATENT APPLICATION: **US/09/804,481A** TIME: 13:57:43

Input Set : **N:\Crf4\11032003\I804481A.raw**
Output Set: **N:\CRF4\11042003\I804481A.raw**

L:6 M:270 C: Current Application Number differs, Wrong Format
L:7 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:127 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0